

### Abstract

A magnetic resonance imaging system for interventional MR imaging involving operations to insert a device such as a catheter into an object. According to the system, a tip position of the catheter is detected, data indicative of moved loci of the catheter are produced from data indicative of the detected tip position, and the produced movement locus data are displayed. In addition, even when an operator changes the progress direction of the device such as a puncture needle, an imaging cross section automatically tracks movements of the device. Appropriate preoperative plan means are also provided.